

## EAST Search History

## EAST Search History (Prior Art)

| Ref # | Hits | Search Query  | DBs   | Default Operator | Plurals | Time Stamp          |
|-------|------|---|---|------------------|---------|---------------------|
| L1    | 1    | "5229628".pn.   | EPO; JPO;<br>DERWENT  | OR               | OFF     | 2009/07/23<br>11:29 |
| L2    | 1    | "6468675".pn.   | EPO; JPO;<br>DERWENT  | OR               | OFF     | 2009/07/23<br>11:30 |
| L3    | 2    | ("4769292").PN. OR<br>("6853133").URPN.   | US-PGPUB;<br>USPAT; USOCR   | OR               | OFF     | 2009/07/23<br>11:57 |
| L4    | 68   | (252/301.16).ccls. and<br>tetracarboxy\$  | US-PGPUB;<br>USPAT  | OR               | ON      | 2009/07/23<br>12:02 |
| L5    | 68   | (252/301.16).ccls. and<br>tetracarboxy\$  | US-PGPUB;<br>USPAT  | OR               | ON      | 2009/07/23<br>12:02 |
| L6    | 27   | (252/301.35).ccls. and<br>tetracarboxy\$  | US-PGPUB;<br>USPAT  | OR               | ON      | 2009/07/23<br>12:04 |
| L7    | 0    | ("428").ccls. and tetracarboxy<br>\$  | US-PGPUB;<br>USPAT  | OR               | ON      | 2009/07/23<br>12:06 |
| S1    | 1    | "5629389".pn.   | USPAT   | OR               | OFF     | 2009/02/10<br>15:24 |
| S2    | 1    | "5965281".pn.   | USPAT   | OR               | OFF     | 2009/02/10<br>15:27 |
| S3    | 3237 | ((phenylene with vinylene)<br>or (aryl with vinylene)) and<br>((light with emitt\$3) or<br>electroluminescent)                              | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND              | OFF     | 2009/02/10<br>15:33 |
| S4    | 3376 | ((phenylene with vinylene)<br>or (aryl with vinylene)) and<br>((light with emitt\$3) or<br>electroluminescent)                              | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND              | ON      | 2009/02/10<br>15:33 |
| S5    | 6    | ((phenylene with vinylene)<br>or (aryl with vinylene)) and<br>((light with emitt\$3) or<br>electroluminescent) and<br>(tetra with carbonyl) | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND              | ON      | 2009/02/10<br>15:34 |
| S7    | 189  | ((phenylene with vinylene)<br>or (aryl with vinylene)) and<br>electroluminescent and<br>carbonyl  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND              | ON      | 2009/02/10<br>15:36 |

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| S8  | 11   | (tetra with carbonyl) and electroluminescent                                | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/02/10<br>15:43 |
| S9  | 8    | (tetrahydro and tetraone) and ((light with emitt\$3) or electroluminescent) | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | OFF | 2009/02/10<br>16:38 |
| S10 | 3036 | (phenylene with vinylene) and ((light with emitt\$3) or electroluminescent) | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | OFF | 2009/02/10<br>16:40 |
| S11 | 2496 | (phenylene adj vinylene) and ((light with emitt\$3) or electroluminescent)  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | OFF | 2009/02/10<br>16:40 |
| S12 | 2    | DTBT and ((light with emitt \$3) or electroluminescent)                     | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | OFF | 2009/02/10<br>16:41 |
| S13 | 17   | DDTT and ((light with emitt \$3) or electroluminescent)                     | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | OFF | 2009/02/10<br>16:41 |
| S14 | 941  | (initial with drop) and ((light with emitt\$3) or electroluminescent)       | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | OFF | 2009/02/10<br>16:43 |
| S15 | 98   | (initial adj drop) and ((light with emitt\$3) or electroluminescent)        | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | OFF | 2009/02/10<br>16:44 |
| S16 | 2    | ("4769292").PN. OR ("6853133").URPN.  | US-PGPUB;<br>USPAT; USOCR   | OR  | OFF | 2009/02/10<br>17:17 |

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| S17 | 0     | (initial with drop) near ((light with emitt\$3) or electroluminescent)                | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | OFF | 2009/07/22<br>13:48 |
| S18 | 38    | (initial with drop) with ((light with emitt\$3) or electroluminescent)                | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | OFF | 2009/07/22<br>13:49 |
| S19 | 1     | 2006/0094859  | US-PGPUB;<br>USPAT  | OR  | OFF | 2009/07/22<br>14:10 |
| S20 | 1     | "20060094859"   | US-PGPUB;<br>USPAT  | OR  | OFF | 2009/07/22<br>14:11 |
| S21 | 1151  | biphenylene and electrolumin\$7   | US-PGPUB;<br>USPAT  | OR  | OFF | 2009/07/22<br>14:20 |
| S22 | 23    | biphenylene with (emissi\$3 or lumin\$7) and electrolumin\$7                          | US-PGPUB;<br>USPAT  | OR  | OFF | 2009/07/22<br>14:21 |
| S23 | 2996  | (tetracarbonyl\$8 or \$5carbonyl\$7) and electrolumin\$7                              | US-PGPUB;<br>USPAT  | OR  | ON  | 2009/07/22<br>15:21 |
| S25 | 8     | (tetracarbonyl\$8 or \$5carbonyl\$7) with additive and electrolumin\$7                | US-PGPUB;<br>USPAT  | OR  | ON  | 2009/07/22<br>15:22 |
| S26 | 750   | (tetracarbonyl\$8 or \$5carbonyl\$7) and electrolumin\$7 with efficien\$5             | US-PGPUB;<br>USPAT  | OR  | ON  | 2009/07/22<br>15:25 |
| S27 | 4     | (tetracarbonyl\$8 or \$5carbonyl\$7) and electrolumin\$7 with (efficien\$5 with drop) | US-PGPUB;<br>USPAT  | OR  | ON  | 2009/07/22<br>15:25 |
| S28 | 1     | "7375462"   | US-PGPUB;<br>USPAT  | OR  | ON  | 2009/07/22<br>16:21 |
| S29 | 76    | tetracarboxylic\$ and ((initial or charging) with emission)                           | US-PGPUB;<br>USPAT  | OR  | ON  | 2009/07/22<br>16:27 |
| S30 | 62    | tetracarboxylic\$ and ((initial or charging) with emission) and electrolumin\$8       | US-PGPUB;<br>USPAT  | OR  | ON  | 2009/07/22<br>16:28 |
| S34 | 4783  | tetracarboxylic\$ and efficien\$  | US-PGPUB;<br>USPAT  | OR  | ON  | 2009/07/22<br>16:35 |
| S35 | 32    | tetracarboxylic\$ with efficien\$   | US-PGPUB;<br>USPAT  | OR  | ON  | 2009/07/22<br>16:35 |
| S36 | 27317 | efficien\$ with drop  | US-PGPUB;<br>USPAT  | OR  | ON  | 2009/07/22<br>16:54 |
| S37 | 19    | efficien\$ with drop and electrolumin\$5  | US-PGPUB;<br>USPAT  | OR  | ON  | 2009/07/22<br>16:55 |

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| S41 | 63  | (quinone adj polymer)  | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>17:12 |
| S43 | 1   | "4792506".pn.  | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>17:18 |
| S45 | 2   | "20050095453"  | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>17:19 |
| S46 | 2   | "20070026257"  | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>17:22 |
| S48 | 2   | "20070207347"  | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>17:24 |
| S49 | 1   | "20060083945"  | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>17:30 |
| S50 | 99  | (carbonyl with compound\$)<br>and (efficiency with diodes)                   | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>17:38 |
| S51 | 463 | (carbonyl with compound\$)<br>and (efficiency with<br>emission)              | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>17:46 |
| S52 | 10  | (carbonyl with compound\$)<br>and (efficiency with initial<br>with emission) | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>17:47 |
| S54 | 1   | "5150006".pn.  | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>17:54 |
| S55 | 930 | (carbonyl with group) and<br>(emission with efficiency)                      | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>17:56 |
| S56 | 3   | (carbonyl with group) with<br>(emission with efficiency)                     | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>17:56 |
| S58 | 1   | "20070194701"  | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>18:39 |
| S59 | 1   | "3287123".pn.  | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>18:41 |
| S60 | 1   | "20020037428"  | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>18:45 |
| S61 | 1   | "7368624".pn.  | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>18:48 |
| S62 | 1   | "20060267004".pn.  | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>19:05 |
| S63 | 1   | "20050274945".pn.  | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>19:06 |
| S65 | 2   | (257/E51.031).ccls. and<br>tetracarboxy\$                                    | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>19:12 |
| S66 | 8   | (257/E51.031).ccls. and ppv  | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>19:13 |
| S67 | 0   | (257/E51.049/E51.05).ccls.<br>and ppv  | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>19:14 |
| S68 | 0   | (257/E51.049/E51.05).ccls.   | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>19:14 |
| S69 | 101 | (257/E51.05).ccls.   | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>19:14 |

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| S70 | 10   | (257/E51.05).ccls. and tetracarbox\$  | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>19:15 |
| S71 | 1    | DTBT and ttbt   | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>19:16 |
| S72 | 358  | \$tetraone\$  | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>19:17 |
| S73 | 1    | \$tetraone\$ and ppv  | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>19:17 |
| S74 | 21   | \$tetraone\$ and arylene  | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>19:18 |
| S75 | 3    | \$tetraone\$ and arylene and electrolumin\$   | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>19:18 |
| S76 | 29   | (252/301.35).ccls. and tetracarbox\$  | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>19:23 |
| S77 | 2943 | ppv and (drop or (emission adj2 loss) or efficiency) and electrolumin\$7                    | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>19:28 |
| S78 | 192  | ppv with (drop or (emission adj2 loss) or efficiency) and electrolumin\$7                   | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>19:28 |
| S79 | 2    | (ppv with additive\$) with (drop or (emission adj2 loss) or efficiency) and electrolumin\$7 | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>19:31 |
| S80 | 0    | (ppv with fused) with (drop or (emission adj2 loss) or efficiency) and electrolumin \$7     | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>19:40 |
| S81 | 0    | (ppv with \$tetraone) with (drop or (emission adj2 loss) or efficiency) and electrolumin\$7 | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>19:42 |
| S82 | 0    | ( \$tetraone) with (drop or (emission adj2 loss) or efficiency) and electrolumin \$7        | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>19:42 |
| S83 | 6    | ( \$tetraone) and electrolumin \$7  | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>19:42 |
| S84 | 1    | "6316591".pn.   | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>19:56 |
| S85 | 1    | "5807945".pn.   | US-PGPUB;<br>USPAT | OR | ON | 2009/07/22<br>19:59 |
| S86 | 6309 | (fused with ring\$) with (tetra \$5 or carbonyl)  | US-PGPUB;<br>USPAT | OR | ON | 2009/07/23<br>08:48 |
| S87 | 426  | (fused with ring\$) with (tetra \$5 or carbonyl) and (light with emitting)                  | US-PGPUB;<br>USPAT | OR | ON | 2009/07/23<br>08:49 |
| S88 | 105  | (fused with ring\$) with (tetra \$5 or carbonyl) and (light with emitting) and drop         | US-PGPUB;<br>USPAT | OR | ON | 2009/07/23<br>08:50 |

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|------|------|--|----------------------|-----|-----|---------------------|
| S89  | 1548 | ((phenylene with vinylene) or (aryl with vinylene)) and carbonyl                       | US-PGPUB;<br>USPAT   | AND | OFF | 2009/07/23<br>09:07 |
| S90  | 1    | ((phenylene with vinylene) or (aryl with vinylene)) near carbonyl                      | US-PGPUB;<br>USPAT   | AND | OFF | 2009/07/23<br>09:07 |
| S91  | 202  | ((phenylene with vinylene) or (aryl with vinylene)) same carbonyl                      | US-PGPUB;<br>USPAT   | AND | OFF | 2009/07/23<br>09:07 |
| S92  | 0    | ((phenylene with vinylene) or (aryl with vinylene)) same tetraone                      | US-PGPUB;<br>USPAT   | AND | OFF | 2009/07/23<br>09:19 |
| S93  | 0    | ((phenylene with vinylene) or (aryl with vinylene)) same tetraone                      | US-PGPUB;<br>USPAT   | AND | ON  | 2009/07/23<br>09:19 |
| S94  | 0    | ((phenylene with vinylene) or (aryl with vinylene)) same \$tetraone                    | US-PGPUB;<br>USPAT   | AND | ON  | 2009/07/23<br>09:19 |
| S95  | 0    | ((phenylene with vinylene) or (aryl with vinylene)) near \$tetraone                    | US-PGPUB;<br>USPAT   | AND | ON  | 2009/07/23<br>09:20 |
| S96  | 0    | ((phenylene with vinylene) or (aryl with vinylene)) near (carboxylic adj3 dianhydride) | US-PGPUB;<br>USPAT   | AND | ON  | 2009/07/23<br>09:21 |
| S97  | 0    | ((phenylene with vinylene) or (aryl with vinylene)) near dianhydride                   | US-PGPUB;<br>USPAT   | AND | ON  | 2009/07/23<br>09:24 |
| S98  | 12   | ((phenylene with vinylene) or (aryl with vinylene)) same dianhydride                   | US-PGPUB;<br>USPAT   | AND | ON  | 2009/07/23<br>09:24 |
| S99  | 166  | ((phenylene with vinylene) or (aryl with vinylene)) and dianhydride                    | US-PGPUB;<br>USPAT   | AND | ON  | 2009/07/23<br>09:24 |
| S100 | 2    | ((phenylene with vinylene) or (aryl with vinylene)) and \$tetraone                     | US-PGPUB;<br>USPAT   | AND | ON  | 2009/07/23<br>09:33 |
| S101 | 8    | ((SIMONE) near2 (VULTO)).<br>INV.  | EPO; JPO;<br>DERWENT | OR  | OFF | 2009/07/23<br>09:35 |

7/ 23/ 2009 12:07:11 PM

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